

# DROUGHT INFORMATION STATEMENT SOUTH CENTRAL TEXAS

# WFO AUSTIN/SAN ANTONIO, TX

ISSUED: SEPTEMBER 14, 2006



### **Synopsis**

The month of August ended dry and September began on a wetter note across the region. There were widely scattered showers and thunderstorms during the final days of August, but rainfall amounts were generally one inch or less. September has seen widespread rainfall with most locations seeing one half to one inch with some locations reporting over 5 inches. Locations to the west and southwest of San Antonio have finally seen some beneficial rainfall. Most locations along the Rio Grande and southwestern sections of south Central Texas have missed out on the rainfall during the entire year. Much of south Central Texas and the Rio Grande region have seen less than 50 percent of the normal yearly rainfall. Total observed rainfall from August 31st through September 12th is shown in figure 1. Figure 2 shows the observed yearly rainfall for 2006.

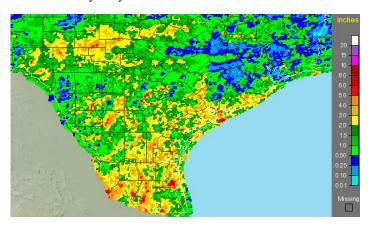


Figure 1 - Total Observed Rainfall August 31st through September 12, 2006.

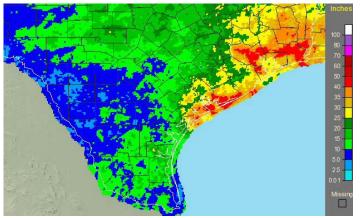


Figure 2 - Total Observed Yearly Rainfall January 1 through September 12, 2006

As shown in figure 3, the U.S. Drought Monitor, issued through the National Drought Mitigation Center on September 14th, shows the lack of rainfall in August is not helping to improve the drought conditions over much of South Central Texas. Lack of rainfall along the Rio Grande and southwestern sections of south Central Texas has kept the region very dry. The latest Drought Monitor map shows a portion of South Central Texas in Exceptional Drought conditions while most of the Hill Country and the remainder of South Central Texas continue to experience Severe to Extreme drought conditions. While recent rains have led to some short-term improvements the long-term deficits remain and the area will need several wet months to erase the deficits.

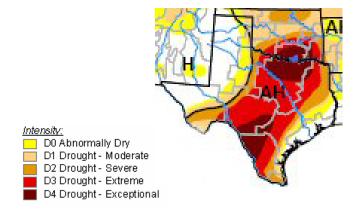


Figure 3 – September 14th, U.S. Drought Monitor

The "AH" in figure 3 indicates that the current drought impacts are both agricultural and hydrological.

The U.S. Drought Monitor is a comprehensive drought monitoring effort between government and academic partners. It is issued each Thursday morning and incorporates hydrometeorological data through 6 AM Tuesday.

### **Hydrologic Impacts**

According to the USGS WaterWatch, most of the rivers across South Central Texas are reporting below normal flows for this time of the year. Many rivers and creeks are almost dry and have very little flow.

Reservoir conditions as of September 13, 2006, are presented in the following table.

Reservoir	Pool Elevation (ft)	Current Elevation (ft)
Amistad	1117.00	1104.19
Medina Lake	1064.2	1033.52
Canyon Lake	909.00	902.98
Granger Lake	504.00	501.36
Lake Georgetown	791.00	772.79
Lake Buchanan	1020.00	1001.84
Lake LBJ	825.00	824.79
Lake Marble Falls	738.00	736.39
Lake Travis	681.00	647.28
Lake Austin	492.90	492.38

According to Texas Commission on Environmental Quality (TCEQ), there are a number of public water supply systems affected by water use restrictions across the Hill Country and south Central Texas. Figure 4 shows all locations of affected systems across Texas.

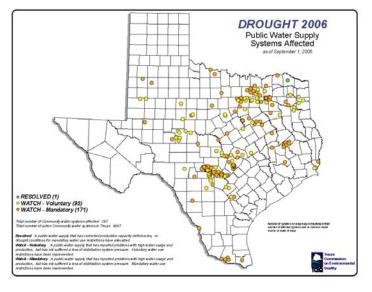


Figure 4 – Water Systems Under Water Use Restrictions as of September 1, 2006.

### Fire Danger Impacts

As of September 13th, 27 South Central Texas counties support county wide outdoor burn bans. Several counties have reinstated burn bans due to lack of rainfall in August. A few South Central Texas counties also have disaster declarations established due to the dry conditions.



Figure 5 - Burn Bans Currently in Effect

The Texas Forest Service uses the Keetch-Byram Drought Index (KBDI) as a system for relating current and recent weather conditions to potential or expected fire behavior. It is a numerical index calculated daily for each county. Each number is an estimate of the amount of precipitation, in hundredths of an inch, needed to bring the soil back to saturation. The index ranges form 0 to 800, with 0 representing a saturated soil and 800 a completely dry soil. As shown in figure 6, the September 13th issuance of the KBDI shows that the Hill Country falls within the 400 to 600 range. The KBDI for the majority of the western and southern parts of South Central Texas falls within the 600 to 800 range.

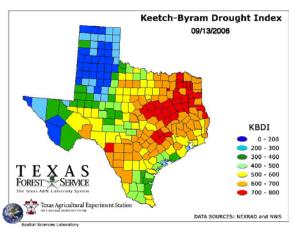


Figure 6 – KBDI Map

The Texas Forest Service advises to watch out for key weather thresholds of winds above 15 mph and relative humidity below 25 percent. When these thresholds are exceeded, expect the fire danger to be elevated.

### Agricultural Impacts

The Climate Prediction Center analyzes the percent of available soil moisture as compared to normal. As of September 12<sup>th</sup>, the available soil moisture ranges from 1 to 10 percent of normal across all of South Central Texas and the Hill Country. Figure 7 depicts available soil moisture percentiles.

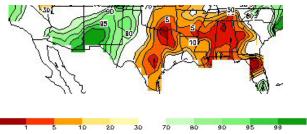


Figure 7 – Percent Available Soil Moisture

According to the Texas Crop Weather Report issued on September 12th, from the Texas A&M Agriculture Program, the following agricultural impacts were noted across south Central Texas:

- The region remains extremely dry with some rainfall and cooler temperatures.
- Peanuts are making good progress under heavy irrigation and harvesting should begin in a few weeks.
- Fall planting of spinach and cabbage continues with fields making progress now that temperatures have cooled, but heavy irrigation was required.
- Ranchers continue to provide heavy supplemental feeding to remaining livestock.

#### Outlook

The Climate Prediction Center Outlook for September through November indicates that there is an increased chance for warmer than normal temperatures across Texas (figure 8). The outlook shows equal chances for normal, below normal or above normal precipitation through November (figure 9).

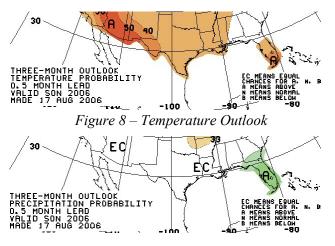


Figure 9 – Precipitation Outlook

As shown in figure 10, the latest U.S. Seasonal Drought Outlook shows that current drought conditions across south Central Texas are expected to persist through November.

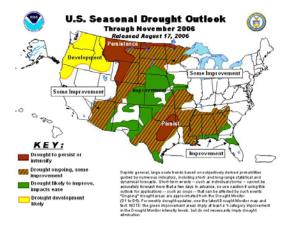


Figure 10 – U.S. Seasonal Drought Outlook Map

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## **Drought Related Links:**

The U.S. Drought Monitor:

http://www.drought.unl.edu/dm

The USGS WaterWatch:

http://water.usgs.gov/waterwatch

TCEQ Map of Water Systems under Water Use Restriction <a href="http://www.tceq.state.tx.us/nav/util">http://www.tceq.state.tx.us/nav/util</a> water/drought.html

The Texas Counties Burn Ban Map:

http://www.tamu.edu/ticc/

The KDBI County Average Map:

http://webgis.tamu.edu/tfs/kbdi daily/kbdicounty.png

CPC Soil Moisture:

http://www.cpc.ncep.noaa.gov/soilmst/w.shtml

Texas AgNews:

http://agnews.tamu.edu/dailynews/index.html

CPC Outlook Maps:

http://www.cpc.ncep.noaa.gov/products/forecasts/

CPC U.S. Seasonal Drought Outlook:

http://www.cpc.ncep.noaa.gov/products/expert assessment/seasonal drought.html